



Dart Aerospace Ltd.  
1270 Aberdeen St  
Hawkesbury, ON  
K6A 1K7  
Canada

Tel (613) 632-5200  
Fax 613 632-5246

**D2150**  
**Job Sheet 214621**



**Part No:** D2150

**Job Qty:** 16 pcs

**Part Name:** Packer Doubler, Hinge



**Part Weight:** 0 lbs

**Status:** New

**Priority:** Medium

**Job Created:** 10/28/20

**Job Tracking No:**

**Due Date:** 11/25/20

**Created By:** Jennifer Renwick

**Type:** Stock

**Description:** SIOP

**Note:** DWG REV A IPP C 00.11.27 Re-format (mpp 2101) EC IPP Rev:D 06-08-23 Now on Waterjet JLM

**Ship Via:**

### Bill of Materials

### Job Routing

| Op<br>No | Operation           | Qty       | Start Date | Due<br>Date | Standard     |            | Workcenter/Supplier      |              | Sign-off    |
|----------|---------------------|-----------|------------|-------------|--------------|------------|--------------------------|--------------|-------------|
|          |                     |           |            |             | Setup<br>Hrs | Run<br>Hrs | Workcenter /<br>Supplier | Lead<br>Time |             |
| 100      | Waterjet - Flow - 1 | 16<br>pcs |            | 11/24/20    | 0.17         | 0.48       | Waterjet - Flow          |              | OK 20/12/20 |
| 110      | QC 2                | 16<br>pcs |            | 11/24/20    | 0.00         | 0.00       | QC 2 - 1                 |              |             |
|          |                     |           |            |             |              |            | QC 2 - 12                |              |             |
|          |                     |           |            |             |              |            | QC 2 - 14                |              |             |
|          |                     |           |            |             |              |            | QC 2 - 17                |              |             |
|          |                     |           |            |             |              |            | QC 2 - 19                |              |             |
|          |                     |           |            |             |              |            | QC 2 - 2                 |              |             |
|          |                     |           |            |             |              |            | QC 2 - 20                |              |             |
|          |                     |           |            |             |              |            | QC 2 - 22                |              |             |
|          |                     |           |            |             |              |            | QC 2 - 23                |              |             |
|          |                     |           |            |             |              |            | QC 2 - 25                |              |             |
|          |                     |           |            |             |              |            | QC 2 - 32                |              |             |
|          |                     |           |            |             |              |            | QC 2 - 33                |              |             |
|          |                     |           |            |             |              |            | QC 2 - 35                |              |             |
|          |                     |           |            |             |              |            | QC 2 - 39                |              |             |
|          |                     |           |            |             |              |            | QC 2 - 4                 |              |             |
|          |                     |           |            |             |              |            | QC 2 - 40                |              |             |
|          |                     |           |            |             |              |            | QC 2 - 44                |              |             |
|          |                     |           |            |             |              |            | QC 2 - 45                |              |             |
|          |                     |           |            |             |              |            | QC 2 - 48                |              | OK 20/12/20 |
|          |                     |           |            |             |              |            | QC 2 - 49                |              |             |
|          |                     |           |            |             |              |            | QC 2 - 50                |              |             |
|          |                     |           |            |             |              |            | QC 2 - 51                |              |             |
|          |                     |           |            |             |              |            | QC 2 - 52                |              |             |
|          |                     |           |            |             |              |            | QC 2 - 57                |              |             |
|          |                     |           |            |             |              |            | QC 2 - 62                |              |             |
|          |                     |           |            |             |              |            | QC 2 - 63                |              |             |
|          |                     |           |            |             |              |            | QC 2 - 8                 |              |             |
|          |                     |           |            |             |              |            | QC 2 - 66                |              |             |
|          |                     |           |            |             |              |            | QC 2 - 64                |              |             |

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|                                   |           |          |           |                           |  |
|-----------------------------------|-----------|----------|-----------|---------------------------|--|
| 120 QC 8                          | 16<br>pcs | 11/24/20 | 0.00 0.00 | QC 2 - 65                 |  |
|                                   |           |          |           | QC 2 - 5                  |  |
|                                   |           |          |           | QC 2 - 71                 |  |
|                                   |           |          |           | QC 2 - 73                 |  |
|                                   |           |          |           | QC 2 - 69                 |  |
|                                   |           |          |           | QC 2 - 76                 |  |
|                                   |           |          |           | QC 2 - 86                 |  |
|                                   |           |          |           | QC 2 - 83                 |  |
|                                   |           |          |           | QC 8 - 12                 |  |
|                                   |           |          |           | QC 8 - 14                 |  |
|                                   |           |          |           | QC 8 - 17                 |  |
|                                   |           |          |           | QC 8 - 20                 |  |
|                                   |           |          |           | QC 8 - 25                 |  |
|                                   |           |          |           | QC 8 - 3                  |  |
|                                   |           |          |           | QC 8 - 32                 |  |
|                                   |           |          |           | QC 8 - 33                 |  |
|                                   |           |          |           | QC 8 - 35                 |  |
|                                   |           |          |           | QC 8 - 39                 |  |
|                                   |           |          |           | QC 8 - 4                  |  |
|                                   |           |          |           | QC 8 - 44                 |  |
|                                   |           |          |           | QC 8 - 45                 |  |
|                                   |           |          |           | QC 8 - 49                 |  |
|                                   |           |          |           | QC 8 - 58                 |  |
|                                   |           |          |           | QC 8 - 8                  |  |
|                                   |           |          |           | QC 8 - 9                  |  |
|                                   |           |          |           | QC 8 - 68                 |  |
|                                   |           |          |           | QC 8 - 67                 |  |
|                                   |           |          |           | QC 8 - 1 (A)              |  |
|                                   |           |          |           | QC 8 - 47                 |  |
|                                   |           |          |           | QC 8 - 40                 |  |
|                                   |           |          |           | QC 8 - 52                 |  |
|                                   |           |          |           | QC 8 - 23                 |  |
|                                   |           |          |           | QC 8 - 57                 |  |
|                                   |           |          |           | QC 8 - 76                 |  |
|                                   |           |          |           | QC 8 - 61                 |  |
|                                   |           |          |           | QC 8 - 66                 |  |
|                                   |           |          |           | QC 8 - 73                 |  |
|                                   |           |          |           | QC 8 - 82                 |  |
| 140 Handfinish - 1-1 Chemical-B4B | 16<br>pcs | 11/24/20 | 0.00 0.25 | Handfinish - 1 - 1 - B4B  |  |
|                                   |           |          |           | Handfinish - 1 - 2 - B4B  |  |
|                                   |           |          |           | Handfinish - 1 - 3 - B4B  |  |
|                                   |           |          |           | Handfinish - 1 - 4 - B4B  |  |
|                                   |           |          |           | Handfinish - 1 - 5 - B4B  |  |
|                                   |           |          |           | Handfinish - 1 - 6 - B4B  |  |
|                                   |           |          |           | Handfinish - 1 - 7 - B4B  |  |
|                                   |           |          |           | Handfinish - 1 - 8 - B4B  |  |
|                                   |           |          |           | Handfinish - 1 - 9 - B4B  |  |
|                                   |           |          |           | Handfinish - 1 - 10 - B4B |  |
|                                   |           |          |           | Handfinish - 1 - 11 - B4B |  |
|                                   |           |          |           | Handfinish - 1 - 12 -     |  |
|                                   |           |          |           |                           |  |

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|                                     |        |          |      |      |  |                           |  |
|-------------------------------------|--------|----------|------|------|--|---------------------------|--|
|                                     |        |          |      |      |  | B4B                       |  |
|                                     |        |          |      |      |  | Handfinish - 1 - 13 - B4B |  |
|                                     |        |          |      |      |  | Handfinish - 1 - 14 - B4B |  |
|                                     |        |          |      |      |  | Handfinish - 1 - 15 - B4B |  |
|                                     |        |          |      |      |  | Handfinish - 1 - 16 - B4B |  |
|                                     |        |          |      |      |  | Handfinish - 1 - 17 - B4B |  |
|                                     |        |          |      |      |  | Handfinish - 1 - 18 - B4B |  |
|                                     |        |          |      |      |  | Handfinish - 1 - 19 - B4B |  |
|                                     |        |          |      |      |  | Handfinish - 1 - 20 - B4B |  |
|                                     |        |          |      |      |  | Handfinish - 1 - 21 - B4B |  |
|                                     |        |          |      |      |  | Handfinish - 1 - 22 - B4B |  |
| 150 Powdercoat - 1 White GI(A)- B4B | 16 pcs | 11/25/20 | 0.00 | 0.11 |  | Powdercoat - 1 - B4B      |  |
|                                     |        |          |      |      |  | Powdercoat - 2 - B4B      |  |
|                                     |        |          |      |      |  | Powdercoat - 3 - B4B      |  |
|                                     |        |          |      |      |  | Powdercoat - 4 - B4B      |  |
|                                     |        |          |      |      |  | Powdercoat - 5 - B4B      |  |
|                                     |        |          |      |      |  | Powdercoat - 6 - B4B      |  |
|                                     |        |          |      |      |  | Powdercoat - 7 - B4B      |  |
|                                     |        |          |      |      |  | Powdercoat - 8 - B4B      |  |
|                                     |        |          |      |      |  | Powdercoat - 9 - B4B      |  |
|                                     |        |          |      |      |  | Powdercoat - 10 - B4B     |  |
|                                     |        |          |      |      |  |                           |  |
| 160 QC 3                            | 16 pcs | 11/25/20 | 0.00 | 0.00 |  | QC 3 - 10                 |  |
|                                     |        |          |      |      |  | QC 3 - 13                 |  |
|                                     |        |          |      |      |  | QC 3 - 15                 |  |
|                                     |        |          |      |      |  | QC 3 - 17                 |  |
|                                     |        |          |      |      |  | QC 3 - 18                 |  |
|                                     |        |          |      |      |  | QC 3 - 2                  |  |
|                                     |        |          |      |      |  | QC 3 - 28                 |  |
|                                     |        |          |      |      |  | QC 3 - 3                  |  |
|                                     |        |          |      |      |  | QC 3 - 30                 |  |
|                                     |        |          |      |      |  | QC 3 - 34                 |  |
|                                     |        |          |      |      |  | QC 3 - 36                 |  |
|                                     |        |          |      |      |  | QC 3 - 41                 |  |
|                                     |        |          |      |      |  | QC 3 - 51                 |  |
|                                     |        |          |      |      |  | QC 3 - 58                 |  |
|                                     |        |          |      |      |  | QC 3 - 59                 |  |
|                                     |        |          |      |      |  | QC 3 - 68                 |  |
|                                     |        |          |      |      |  | QC 3 - 9                  |  |
|                                     |        |          |      |      |  | QC 3 - 40                 |  |
|                                     |        |          |      |      |  | QC 3 - 19                 |  |
|                                     |        |          |      |      |  | QC 3 - 43                 |  |
|                                     |        |          |      |      |  | QC 3 - 24                 |  |
|                                     |        |          |      |      |  | QC 3 - 61                 |  |
|                                     |        |          |      |      |  | QC 3 - 81                 |  |
|                                     |        |          |      |      |  | QC 3 - 82                 |  |
|                                     |        |          |      |      |  | QC 3 - 87                 |  |
|                                     |        |          |      |      |  | QC 3 - 47                 |  |
|                                     |        |          |      |      |  |                           |  |
| 170 Packaging 3-1 - Stock - B4B     | 16 pcs | 11/25/20 | 0.00 | 0.00 |  | Packaging 3 - 1 - B4B     |  |
|                                     |        |          |      |      |  | Packaging 3 - 2 - B4B     |  |
|                                     |        |          |      |      |  | Packaging 3 - 3 - B4B     |  |
|                                     |        |          |      |      |  | Packaging 3 - 4 - B4B     |  |

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[https://www.plexonline.com/5c422b8e-8157-4bb6-92fd-5f61c481481a/Plexus\\_Control/Report\\_Viewer\\_2.asp?URL=https://www.plexonline.com/5c422b...](https://www.plexonline.com/5c422b8e-8157-4bb6-92fd-5f61c481481a/Plexus_Control/Report_Viewer_2.asp?URL=https://www.plexonline.com/5c422b...) 4/5

QC 21 - SA - 77

QC 21 - SA - 28

Part Op 100 - 1-Cut as per Dwg D2150

Descriptions: 110 - (QC2- Inspect parts off machine FAI/FAIB)

120 - (QC8- Inspect parts - second check)

140 - (Chemical Conversion Coat per QSI005 4.1)

150 - (White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum) START TIME: \_\_\_\_\_ FINISH TIME: \_\_\_\_\_

160 - (QC3- Inspect Part Finish)

170 - (Identify as per dwg &amp; Stock Location: \_\_\_\_\_)

180 - (QC21- Final Inspection - Work Order Release)

**Job BOM**

| Part / Item  | Component Name     | Quantity           | Operation               | Container      |
|--------------|--------------------|--------------------|-------------------------|----------------|
| M2024T3S.040 | 2024-T3 .040 Sheet | .4000 sf (.025 ea) | 100-Waterjet - Flow - 1 | <b>S153359</b> |

**Job Allocations**

| Operation               | Component Part | Required | Inventory | Allocated |
|-------------------------|----------------|----------|-----------|-----------|
| 100-Waterjet - Flow - 1 | M2024T3S.040   | 0        | 71        | 0         |

**Part Specifications**

| Spec No | Description | Target/Tolerance               | Limits         | Type  | Special Comments |
|---------|-------------|--------------------------------|----------------|-------|------------------|
| 1       | Packer      | 0.740Inches ± 0.010            | 0.750<br>0.730 | .743  |                  |
| 2       | Packer      | 2.050Inches ± 0.010            | 2.060<br>2.040 | 2.056 |                  |
| 3       | Packer      | 0.231Inches ± 0.010            | 0.241<br>0.221 | .235  |                  |
| 4       | Packer      | 1.217Inches ± 0.010            | 1.227<br>1.207 | 1.219 |                  |
| 5       | Packer      | 1.559Inches ± 0.010            | 1.569<br>1.549 | 1.566 |                  |
| 6       | Packer      | 2.300Inches ± 0.010            | 2.310<br>2.290 | 2.307 |                  |
| 7       | Packer      | 1.560Inches ± 0.010            | 1.570<br>1.550 | 1.562 |                  |
| 8       | Packer      | 0.250Inches ± 0.010            | 0.260<br>0.240 | .254  |                  |
| 9       | Packer      | 1.328Inches ± 0.010            | 1.338<br>1.318 | 1.330 |                  |
| 10      | Packer      | 0.342Inches ± 0.010            | 0.352<br>0.332 | .344  |                  |
| 11      | Packer      | 0.098Inches + 0.005<br>- 0.000 | 0.103<br>0.098 | .099  | Diameter         |
| 12      | Packer      | 0.171Inches + 0.005<br>- 0.000 | 0.176<br>0.171 | .170  | Diameter         |
| 13      | Packer      | 0.040Inches ± 0.010            | 0.050<br>0.030 | .040  |                  |

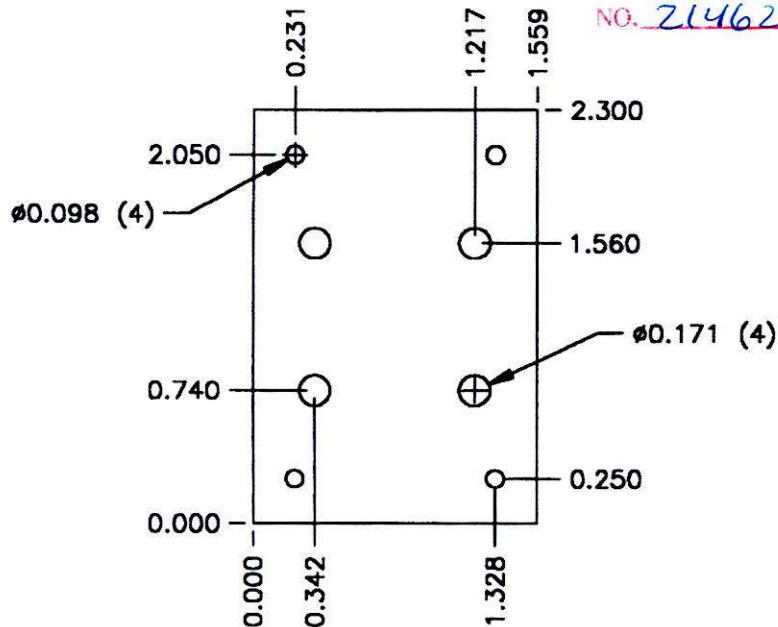
Plex 10/28/20 10:06 AM Dart.Renwick.Jennifer



|                      |                       |                                                              |                        |
|----------------------|-----------------------|--------------------------------------------------------------|------------------------|
| DESIGN<br>B WILLIAMS | DRAWN BY<br>K HAND    | DART AEROSPACE LTD<br>VICTORIA INTERNATIONAL AIRPORT, CANADA |                        |
| CHECKED<br><i>BW</i> | APPROVED<br><i>BW</i> | DRAWING NO.<br>D2150                                         | REV. A<br>SHEET 1 OF 1 |
| DATE<br>95:05:01     |                       | TITLE<br>PACKER                                              | SCALE<br>1:1           |

RELEASED  
96/06/13 BW

SHOP COPY OCT 28 2020  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 214621



MATERIAL: 2024-T3, 0.040 THICK  
FINISH: WHITE POWDER COAT HI-GLOSS

Entered: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

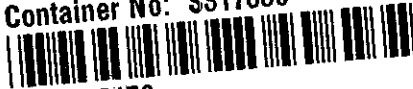
NCR No. \_\_\_\_\_

Route update only ☐

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |                        |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------------|--|
| Job: _____<br><br>Part No. _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/> | <b>DEPARTMENT/PROCESS</b><br><br><div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/><br/>           Machining <input type="checkbox"/><br/>           Large Fab <input type="checkbox"/> </div> <div>           Cross tube <input type="checkbox"/><br/>           Small Fab <input type="checkbox"/><br/>           Finishing <input type="checkbox"/> </div> <div>           Eng. (Non-AW) <input type="checkbox"/><br/>           Prod. Eng. Coord. <input type="checkbox"/><br/>           Rec/Store/Packaging <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/><br/>           Water Jet <input type="checkbox"/><br/>           Supplier <input type="checkbox"/><br/>           Quality <input type="checkbox"/> </div> </div>                                                                                                                                                                                                                                                                      |  |                        |  |
| Date :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Sequence #:                                                                                                                       | QTY Affected :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  | MRB (QS1042)           |  |
| Description Work Order Deviation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                   | Disposition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  | Completed By           |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  | Lead hand / Supervisor |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |                        |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  | QC / QA Coordinator    |  |
| <b>Root Cause</b><br><br><div style="display: flex;"> <div style="flex: 1;">           Operator <input type="checkbox"/><br/>           Manufacturing Process <input type="checkbox"/><br/>           Equip/Tooling <input type="checkbox"/><br/>           Handling/Presservation <input type="checkbox"/><br/>           Material <input type="checkbox"/><br/>           Product Improvement <input type="checkbox"/><br/>           Process Improvement <input type="checkbox"/><br/>           Human Factors <input type="checkbox"/> </div> <div style="flex: 1;"> <input type="checkbox"/> Pressure/Forced<br/> <input type="checkbox"/> Bending<br/> <input type="checkbox"/> Crushing<br/> <input type="checkbox"/> Cracks<br/> <input type="checkbox"/> Crimp/Kink/Ripple/Wave/Twist<br/> <input type="checkbox"/> Marks/Chatter<br/> <input type="checkbox"/> Mislabeled         </div> </div> |                                                                                                                                   | <b>FAULT CATEGORY</b><br><br><div style="display: flex;"> <div style="flex: 1;"> <input type="checkbox"/> Contamination<br/> <input type="checkbox"/> Misaligned/off center<br/> <input type="checkbox"/> BOM/Route<br/> <input type="checkbox"/> Broken/Damage/Defect<br/> <input type="checkbox"/> Incomplete/Unclear Instructions<br/> <input type="checkbox"/> Drill Holes<br/> <input type="checkbox"/> Fit/Function         </div> <div style="flex: 1;"> <input type="checkbox"/> Power Loss/Surge<br/> <input type="checkbox"/> Folio/Program<br/> <input type="checkbox"/> Grain Direction<br/> <input type="checkbox"/> Weld<br/> <input type="checkbox"/> Wrong Stock Pulled<br/> <input type="checkbox"/> Out of Sequence<br/> <input type="checkbox"/> Off-set/Set-up         </div> <div style="flex: 1;"> <input type="checkbox"/> Positioned Wrong<br/> <input type="checkbox"/> Outside Tolerance<br/> <input type="checkbox"/> Drawing<br/> <input type="checkbox"/> Finish<br/> <input type="checkbox"/> Part Lost/Missing<br/> <input type="checkbox"/> Misread         </div> </div> |  |                        |  |
| Other/Details:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |                        |  |



Container No: S317350



Part: D2150

Job No: 214621

Serial No/Batch: S317350

Revision:

Inspector:

Exp Date:

Instructions: Various STC's

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Email: sales@dartaero.com  
www.dartaerospace.com

Date: 12/01/20